

**Notice of Allowability**

Application No.

09/547,191

Examiner

Ella Colbert

Applicant(s)

NORI ET AL.

Art Unit

3624

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08 July 2005.
2. ☒ The allowed claim(s) is/are 1-34, 38-40 and 47-51.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 11/4/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-34, 38-40 and 47-51 are pending in this communication filed 07/08/05 entered as Response After Non-Final Action.
2. The IDS filed 6/26/2000 is missing from the file. Applicants' are respectfully requested to resubmit the missing IDS for reconsideration. The IDS filed 11/04/05 has been considered.

### ***Allowable Subject Matter***

3. Claims 1-34, 38-40 and 47-51 are allowable .
4. The following is an Examiner's Statement of Reasons for Allowance:

The present Application has been thoroughly reviewed. Upon searching a variety of databases, the Examiner respectfully submits that –reading data from one or more rows of the set of one or more tables, wherein the one or more rows do not store an object id used for modeling the data in the one or more rows as an object that belongs to the object class, reading database metadata that defines how to derive object ids from values in one or more columns, and generating in the manner defined by the database metadata, an object id derived from one or more values in the one or more columns in the one or more rows –in a method of independent claim 1, reading first database metadata that indicates how to generate a column object from one or more columns and reading a first set of data from the one or more columns of a plurality of rows from the set of one or more tables, wherein the second database metadata defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns of independent claim 7,

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database metadata that indicates how to derive object ids from values in one or more columns and a set of one or more tables, the set of one or more tables containing one or more rows, wherein the one or more rows do not store an object id for modeling the data in the one or more rows as an object that belongs to the object class – a system of independent claim 16, first database metadata that defines how to generate a column object from one or more columns and second database metadata that defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns –a system of independent claim 19, a computer readable medium carrying one or more sequences of one or more instructions for presenting data from a set of one or more tables as a set of objects that belong to an object class, wherein the execution of the one or more sequences of the one or more instructions causes the one or more processors to perform the steps of reading data from one or more rows of the set of one or more tables, wherein the one or more rows do not store an object id used for modeling the data in the one or more rows as an object that belongs to the object class and reading database metadata that defines how to derive object ids from values in one or more columns in independent claim 20; a computer-readable medium carrying one or more sequences of one or more instructions for presenting, as an object, data from a set of one or more tables residing in one or more database, wherein the execution of the one or more sequences of the one or more instructions causes the one or more processors to perform the steps of reading first database metadata that defines how to generate a column object from one or more columns and reading a first set of data from the one or more columns of a

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plurality of rows from the set of one or more tables, wherein second database metadata defines the one or more tables, wherein the second database metadata does not specify how to generate the column object from the one or more columns in independent claim 24; and a method performed by one or more computers, comprising maintaining, separate from the table definition an object class definition, metadata that indicates how to derive object ids from values stored in the table; and the database server deriving, based on the metadata, object ids for objects of the object class from the values stored in the table is not taught by the prior art of record (PTO-892, 1449). Therefore, all pending claims are hereby allowed.

Since allowable subject matter has been indicated, Applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Baker et al (EPO 0504085 A1) disclosed accessing data in a relational database outside the object-oriented environment.

Johnson et al (US 5,644,764) disclosed object modeling and metadata.

Daudenarde (US 5,995,973) disclosed relationship tables identifying object relationships.

Smiley (US 6,263,341 B1) disclosed modeling data as objects, the relationships, and meta-data.

Czejdo, B. and Taylor, M.C. disclosed an object-oriented data model with an underlying relational database system.

Gardarin, Georges; Finance, Beatrice; and Fankhouser, Peter disclosed federating object-oriented and relational databases and organizing schemas and repositories.

### **Inquiries**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 571-272-6741. The examiner can normally be reached on Monday-Thursday, 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 571-272-6747. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 12, 2006

  
ELLA COLBERT  
PRIMARY EXAMINER